

Appln No. 09/721,858
Amdt. Dated September 01, 2004
Response to Office action of July 06, 2004

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REMARKS/ARGUMENTS

The Office Action has been carefully considered. The issues raised are traversed and addressed below with reference to the relevant headings and paragraph numbers appearing under the Detailed Action of the Office Action.

Claim Rejections – 35USC § 103

In this section, the Examiner has objected to claims 1 to 27 as being obvious in light of Delfer et al and Hube et al. In view of the Examiner's objections, the claims have been amended to introduce further distinctions over the prior art. As a result we believe that all pending claims are novel and inventive.

Firstly we respectfully submit that a person skilled in the art would not consider combining the teachings of Delfer et al and Hube et al to create a printer which prints collated multi-page documents from a plurality of manually collated pages.

Delfer et al describes a bulk mail system that includes a document collating means for collating inserts according to a customer. In particular, column 6, lines 3 to 45 describes using a bar code scanner that verifies that the correct bill, envelope, and inserts are collated together in a group to allow the documents to be mailed to the correct customer. Therefore the collating method operates according to grouping documents. This feature of group collation is most prevalent at lines 3 to 5 of column 4 where the types of inserts that are collated are described including advertisements, fliers, return envelopes and coupons. These forms of documents require no ordering with respect to each other, as there is no relevance between each document. Therefore, Delfer et al describes a bulk mailing system that includes a collating means that collates according to groups.

In contrast, Hube et al describes method of using a system for printing and collating a number of ordered documents. This is most apparent at lines 21 to 25 of column 7, where an ordered stack is described including a number of components, wherein the order of the stack corresponds to the order in which a master document is to be collated. Therefore, Hube et al describes a method of using a system for printing a number of documents that are collated in a particular order.

Therefore, we respectfully submit that it would not be obvious for someone skilled in the art to consider combining Delfer et al with Hube et al, as Delfer et al describes a group collation means, and in contrast Hube et al describes an ordered collating method. These two techniques of collating are very different and require different printer components. Therefore we respectfully submit that a person skilled in the art would not consider combining such documents implementing such contrasting collating techniques.

In any event in order to obtain speedy allowance, claim 1 has now been amended to specify that the machine readable codes, which are sensed by the code sensor, are substantially invisible to the unaided human eye. This feature of substantially invisible machine readable codes printed on the manually collated pages is not shown by the prior art, and we respectfully submit renders the claim novel and inventive.

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Delfer et al describes using a bar code reader to read a bar code printed on a cover sheet to verify that the correct documents are grouped together for a specific customer. Therefore the system described by this document uses visual machine readable codes. At lines 9 and 10 of column 6, the document describes the system requiring a cutter that trims the bar code off the cover sheet such that the unsightly bar code does not exist on the cover sheet.

Furthermore, Hube et al describes printing a job reference sheet with bar codes associated with the identity of the document to be printed. At lines 14 to 20, the document describes using a "rasterized bar-code with any conventional technique", such as "Matrix 2 of 5", "glyphs", or "marksense". It is apparent that the techniques used in the method are specific to visual machine readable data. Additionally, it refers to "conventional techniques" which use visual techniques, and is in contrast to invisible machine readable code which is unconventional.

The Examiner objected to claim 12 (the content of which has now been included in amended claim 1) in light of Hube et al with reference to column 3 lines 25 to 28. However, we respectfully submit that this does not describe coded data substantially invisible to the human eye. Lines 25 to 28 of column 3 in Hube et al describe "that a unique job identifier is designated on the job reference sheet in machine readable code; and scanning the job reference sheet for reading the machine readable code". We respectfully submit that there is absolutely no reference to machine readable codes that are not visible to human vision within the lines referenced by the Examiner, or anywhere else in the document.

Therefore, even if the teachings of Delfer et al with Hube et al were combined, a skilled person in the art would only be led to a system using visual machine readable data. This feature of machine readable codes which are substantially invisible is a novel and inventive feature that provides advantages over the prior art.

In order to allow a user to manually collate pages that are to be printed, some visual information must be provided on the page such that the user can identify the page quickly. Therefore, having visual information printed on the same page as the bar code can lead to problems, especially associated with a page containing a visual picture where the bar code will be difficult to scan using conventional bar code scanners. By providing machine readable codes that are invisible in the visual spectrum, but are visible at other wavelengths such as infra-red, the bar code can be easily distinguished from the visual information on the page. Furthermore, the use of bar codes is unsightly and undesirable in many instances where printed information is disseminated. Therefore we respectfully submit that invention defined by claim 1 provides a number of advantages over the prior art, and therefore is novel and inventive.

As evidence of this we draw the Examiner's attention to Delfer et al which utilises a cutter that trims the bar code off cover sheets. A skilled person in the art would be led to believe that such a step and component would be necessary if the unsightly bar code needed to be removed from the page, whereas the present invention defined by claim 1 avoids this through the use of codes which are invisible to the human eye.

Similar arguments apply to claim 18.

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CONCLUSION

In light of the above, it is respectfully submitted that the objections and claim rejections have been successfully traversed and addressed. The amendments do not involve adding any information that was not already disclosed in the specification, and therefore no new matter is added. Accordingly, it is respectfully submitted that the claims 1 to 25, and the application as a whole with these claims, are allowable, and a favourable reconsideration is therefore earnestly solicited.

Very respectfully,

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